UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,436	11/12/1999	JEFFREY MARK ACHTERMANN	AUS919990655US1	9315

35525 7590 01/11/2007

IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER	
TODD, GREGORY G	
ART UNIT	**PAPER NUMBER**
2157	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/438,436	ACHTERMANN ET AL.	
	Examiner	Art Unit	
	Gregory G. Todd	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-15,17-26 and 28-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-15,17-26 and 28-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Appeal

1. This office action is in response to applicant's appeal brief filed, 11 October 2006, of application filed, with the above serial number, on 12 November 1999 in which no claims have been amended. Claims 1-4, 6-15, 17-26, and 28-33 are therefore pending in the application.

In view of the Appeal Brief filed on 11 October 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 12-14, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky (hereinafter "Zolnowsky", 6,779,182) in view of Kumpf et al (hereinafter "Kumpf", 6,289,371).

Zolnowsky teaches, substantially, the invention as claimed including job and thread prioritized scheduled (see abstract).

As per Claims 1, 12, and 23, Zolnowsky discloses a connection scheduling method, wherein Zolnowsky discloses:

determining if a job is available for scheduling (job scheduling) (at least col. 5, lines 13-21);

determining, in response to said step of determining if said job is available, if a session is available, wherein said session is included in a pool of sessions (threads), said pool of sessions having a preselected one of a set of priority levels corresponding to a priority level of said job and wherein said session effects an execution of said job (runnable threads in queue of threads with dispatch priority) (at least col. 6, lines 33-65); and

launching said session to effect said execution of said job, if said session is available (thread (and processor / job) selected for execution) (at least col. 7, lines 17-28; col. 8, lines 43-60).

While Zolnowsky does teach scheduling errors in thread queues (at least col. 8, lines 3-17), Zolnowsky fails to explicitly teach the step of launching an error handling thread in response to an error condition, said error handling thread releasing said session. However, the use and advantages for using such an error handling thread is

well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Kumpf. Kumpf teaches launching a thread and encountering an error, at which time, an error recovery algorithm is executed and the thread finishes (at least col. 7, lines 41-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Kumpf's error recovery algorithm into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Kumpf teaches, when an error does occur, it is desirable to execute an algorithm to handle the error and release the session by 'finishing' it.

As per Claims 2, 13, and 24.

session comprises a thread (thread) (at least col. 6, lines 33-65).

As per Claims 3, 14, and 25.

creating a connection to a target system for execution of job (target processor being selected) (at least col. 10, lines 21-42).

4. Claims 4, 6-9, 15, 17-20, 26, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Kumpf and further in view of Northrup (hereinafter "Northrup", 6,671,713).

As per Claim 4, 15, and 26.

Zolnowsky and Kumpf do not explicitly disclose determining if connection is an existing connection, and creating the connection is performed if connection is not an existing connection. However, Northrup teaches if a connection primitives wherein a

thread communication service will run upon request for communication (at least col. 4, lines 22-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Northrup's connection primitives into Zolnowsky and Kumpf's system as Northrup teaches communication occurring upon connection commencing.

As per Claims 6, 17, and 28.

Zolnowsky and Kumpf fail to explicitly disclose changing value of a job state from a first value to a second value in response to said launching of said error handling thread. Northrup teaches the use of a thread returning an error condition and "error" state (at least col. 56, lines 33-36; col. 55, lines 27-35; col. 27 line 66 - col. 28 line 15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of having a value being changed when an error occurs as Northrup discloses into Zolnowsky and Kumpf's system as this would reduce scheduling errors in Zolnowsky and Kumpf's system and define conditions of the thread.

As per Claims 7, 18, and 29.

the first value signaling that the job is available for scheduling (non-errors not being caught in verification step) (at least Zolnowsky col. 8, lines 11-17).

As per Claims 8, 19, and 30.

Zolnowsky teaches retrying the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session (at least Zolnowsky col. 8, lines 11-17; error resulting in selecting correct queue). Kumpf teaches

finshing a thread when an error is encountered (at least col. 7, lines 41-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Kumpf's session release into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Kumpf teaches, when an error does occur, it is desirable to release and finish the session.

As per Claims 9, 20, and 31.

Zolnowsky and Kumpf fail to explicitly disclose the step of retrying to be repeated until a predetermined time interval has elapsed. However, the use and advantages for retrying tasks based on elapsed time is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Northrup (at least Northrup col. 10 line 49 - col. 11 line 18). Northrup discloses relaunching after a delay period after it attempts to relaunch immediately. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Northrup's time-interval thread launching into Zolnowsky and Kumpf's system because this would further allow tasks that could not be completed and relaunched the second time to attempt again at a later time when there might be less network congestion, for example.

5. Claims 10-11, 21-22, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Kumpf and Northrup and further in view of Rangarajan et al (hereinafter "Rangarajan", 6,260,077).

As per Claims 10, 21, and 32.

Zolnowsky, Kumpf and Northrup fail to explicitly disclose registering a callback method in response to an expiry of a predetermined time interval. However, the use and advantages for responding to a time expiration is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Rangarajan (at least Rangarajan Abstract; col. 17, lines 13-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Rangarajan's responding to an expiry of an elapsed time into Zolnowsky, Kumpf and Northrup's system because this would invoke an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function and then return control to Zolnowsky, Kumpf and Northrup's host computer (target system) upon the predetermined time interval.

As per Claims 11, 22, and 33.

Zolnowsky, Kumpf and Northrup fail to explicitly disclose the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session being performed in response to an invoking of a callback method by a target system, the target system for execution of said job. However, the use and advantages for a target system responding to an elapsed time expiration is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Rangarajan (at least Rangarajan Abstract; col. 17, lines 13-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Rangarajan's responding to an expiry of an elapsed

time into Zolnowsky, Kumpf and Northrup's system because this would invoke an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function and then return control to Zolnowsky, Kumpf and Northrup's host computer (target system) upon the predetermined time interval, and thus have the requested task be entered into the thread and be completed.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 6-15, 17-26, and 28-33, have been considered but are moot in view of the new ground(s) of rejection. Applicants arguments to dependent claims are moot as Zolnowsky in view of Kumpf changes scope of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newly cited Chkodrov et al, in addition to previously cited Rhee et al, Hogle et al (col. 8-9; error handling and the use of exceptions) and Periwal et al (col. 12; error handling and the use of exceptions), Cohen et al, Bhagat et al, Silva et al ('760), Hanif et al, Dixon et al, Herbert et al, Brackett et al, Marshall, Teng, Batra, Behm et al, Davis et al, Murray, Trugman, Morris et al, Sundararajan, Beaulieu et al, Farrell et al, Bigus, Silva et al ('537), and Coffman et al and Ross et al are cited for disclosing pertinent information related to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G. Todd whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory Todd
Patent Examiner
Technology Center 2100

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER